

REMARKS

Claims 1-3, 5 and 7 are pending in the present application. Claims 1-3 and 5 stand rejected. Claim 7 was withdrawn from consideration. Applicants have amended claim 1 and canceled claim 7, without prejudice.

Claims 1-3 and 5 stand rejected under 35 U.S.C. §102(b or e) as anticipated by or in the alternative, under 35 U.S.C. 103(a) as obvious over U.S. Patent Application US 2002/0010291 to Murphy et al. or U.S. Patent Application 2004/0116615 to Boussand et al. Applicants maintain that the present invention is very different than the inventions disclosed in the cited references. Furthermore, applicants believe the instant amendment to claim 1 should obviate the present rejection.

In response to Applicant's January 3, 2007 filing, the Examiner states that present claims do not have minimum amounts of ionic liquid and therefore read on trace amounts. The Examiner further states that it is reasonable to presume that the examples in the cited references have trace amounts of ionic liquid even though the ionic liquid has been removed. Therefore, according to the Examiner, the present claims are anticipated by or obvious from the examples found in the cited references.

In response to the Examiner's comments, and to more clearly delineate the invention, applicants have amended independent claim 1 to include a specific amount of ionic liquid. Thus, in the present invention, the ionic liquid is added in an amount of at least 0.1 parts by weight with respect to 100 parts by weight of the unvulcanized rubber base. Support for the amendment can be found on page 13, lines 2-9 and Examples 1-10. Importantly, the ionic liquid

is positively and intentionally added so as to ensure conductivity in the rubber member. That is to say, the ionic liquid present in the moderately resistive rubber member in the present invention could not simply be considered trace amounts, as suggested by the Examiner with regard to Murphy and Boussand.

Murphy and Boussand, on the other hand, remove the ionic liquid. Even if the Examiner's suggestions were true, that there is a reasonable possibility of trace amounts of an ionic liquid remaining after removal, the present invention is novel and not obvious because the present invention purposely includes the ionic liquid in a precise minimum amount. Specifically, independent claim 1 of the present invention contains the limitation that at least 0.1 parts by weight of the unvulcanized rubber base.

Not only does the present invention require a minimum amount of ionic liquid, the instant invention is fundamentally different than that disclosed by Murphy or Boussand. The present invention relates to a moderately resistive rubber member, which can reliably attain a target resistance. To accomplish this resistance, the rubber member of the present invention employs an ionic liquid as a conductive agent. The ionic liquid is positively and intentionally added so as to ensure conductivity. (See specification at page 3, lines 7-18). Consequently, the rubber member can reliably attain a larger resistance. The final product in the present invention contains an ionic liquid.

In contrast, Murphy uses the ionic liquid as a catalyst for producing polyisooolefin (see [0009] in Murphy) or as a reaction medium (see [0010] in Murphy). In further contrast, Murphy purposely removes the ionic liquid. Catalysts and reaction media are typically removed from the reaction system after reaction is complete. In Murphy, the ionic liquid is removed. In

fact, Murphy describes, from lines 9 to 12 in [0058] that the produced polymer (polyisooolefin) is separated from the catalyst. Therefore, there is substantially no ionic liquid in the final products in Murphy. Even if trace amounts remained as suggested by the Examiner, Murphy does not positively include an ionic liquid in a minimum amount in a resulting product.

Boussand employs an ionic liquid as a solvent for catalyst used in the production of a hydrogenated unsaturated block copolymer (See [0020] in Boussand). However, catalysts and solvents thereof are typically removed (or recycled) from the reaction system after reaction is complete (See [0008] in Boussand). As in Murphy, Boussand removes the ionic liquid. Thus, there is substantially no ionic liquid in the final products in Boussand. Even if trace amounts of an ionic liquid remained after removal, as suggested by the Examiner, Boussand does not positively include an ionic liquid in a minimum amount in a resulting product.

Therefore, Murphy or Boussand, alone or in combination, do not teach, disclose or suggest the present invention. The outstanding rejection should be withdrawn.

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Conclusion

Based on the Amendments and Remarks above, Applicant respectfully requests allowance of all pending claims.

Respectfully submitted,
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